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ANALYZING THE INFLUENCE OF KOLS AND KOCS ON ONLINE PURCHASE DECISIONS OF STUDENTS

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ABSTRACT

This study investigates the influence of KOLs and KOCs on online purchase decisions among university students in the context of digital consumption. The research adopts an integrated theoretical framework that synthesizes the TAM, the TPB, the e-CAM, and the SOR paradigm to provide a comprehensive understanding of the decision-making process in a technology-mediated environment. The study focuses on the relationships between several independent variables, namely livestream channels, product categories, the perceived credibility and influence of KOLs/KOCs, and the timing of livestream sessions, and a single dependent variable: the students' online purchase decisions. Survey data were collected from a sample of 485 university students in Hanoi, Vietnam, all of whom had prior experience with online shopping through livestream platforms or social media. The empirical findings reveal that perceived trust in KOLs and KOCs, along with the timing of livestreams, are the most significant and direct predictors of purchase behavior. Additionally, livestream platforms and product categories function as moderating variables, indirectly shaping consumer behavior through psychological constructs such as perception and attitude. By integrating constructs from TAM, TPB, e-CAM, and SOR, the study offers valuable insights into how technological, social, and cognitive factors jointly influence consumer decision-making. These findings contribute to a deeper understanding of digital-era marketing dynamics and highlight the importance of authenticity, credibility, and timing in influencer-based marketing strategies targeted at digitally native consumers.

KEYWORDS: KOL/KOC, e-CAM, SOR, online shopping, purchase decisions

INTRODUCTION

Live commerce, or online shopping via livestream platforms, is rapidly emerging as a global trend, with Asia leading in adoption and market growth. In China, live commerce revenue surged from USD 57.12 billion in 2019 to nearly USD 682.5 billion by 2023, representing a dramatic increase driven by the fusion of entertainment and commerce (Forbes, 2025). In contrast, the U.S. market remains nascent, with livestream commerce accounting for only about 5% of total e-commerce sales in 2024—substantially lower than China's 60%. However, TikTok Shop in the U.S. outperformed major players like Shein and Sephora in the same year, indicating rising consumer interest (Ark Invest, 2025). In

Vietnam, 2024 marked an explosive year for e-commerce. The combined sales of the four leading platforms, Shopee, Lazada, TikTok Shop, and Tiki, reached USD 13.8 billion, reflecting a 40% year-on-year increase. The overall e-commerce market exceeded USD 25 billion, growing by 20% compared to the previous year (VnExpress, 2025). Live commerce played a central role in this growth, with approximately 2.5 million livestream shopping sessions and over 50,000 active sellers each month (Feedforce Vietnam, 2025).

Key Opinion Leaders (KOLs) and Key Opinion Consumers (KOCs) significantly influence online purchase decisions, particularly among younger audiences and university students. Research conducted in Ho Chi Minh City revealed that credibility (expertise and likability), interactivity, and reputation of KOLs directly impact Gen Z's purchase intentions, with trust acting as a crucial mediating variable (ResearchGate, 2024). Additional studies have confirmed that factors such as KOLs' perceived reputation, content involvement, aesthetic quality, and alignment with consumer identity shape shopping behavior (Frontiers in Communication, 2023).

Similarly, KOCs, consumers with influential digital footprints, enhance purchase intention by sharing authentic product reviews and personal experiences. Nguyen et al. (2023) demonstrated that KOCs indirectly affect purchase intention by influencing perceived risk and trust, with credibility mediating the relationship between KOC expertise and consumer intention.

This study integrates three theoretical models: the Technology Acceptance Model (TAM), Theory of Planned Behavior (TPB), and the extended Consumer Acceptance Model (e-CAM), along with the Stimulus–Organism–Response (SOR) framework to examine the influence of KOLs and KOCs on digital consumption behavior among university students in Hanoi, Vietnam. This integrated framework enables a holistic analysis of how technological, social, and psychological drivers shape students' online purchase decisions. The findings aim to provide strategic insights for businesses and policymakers to enhance digital marketing effectiveness and promote safer, more informed consumer behavior in the era of digital transformation.

2. Theoretical Foundations and Research Model

2.1 Relevant Theoretical Models

The Technology Acceptance Model (TAM), originally developed by Davis (1989), explains the determinants of individuals' acceptance and usage of technology. It is derived from the Theory of Reasoned Action (TRA) by Fishbein and Ajzen (1975) and has become foundational in information systems research. In the context of online shopping, particularly among university students, e-commerce platforms are considered more favorable when they are user-friendly, easy to navigate, and offer tangible benefits such as time savings and access to transparent, informative product details.

The Theory of Planned Behavior (TPB), introduced by Ajzen (1991), extends TRA to account for

behaviors under incomplete volitional control. When peers express positive evaluations of a product or a KOL/KOC, students are more likely to trust and adopt that information. Additionally, perceived behavioral control, reflecting one's self-efficacy and awareness of technical constraints, significantly shapes the likelihood of enacting purchase behavior.

The Extended Consumer Acceptance Model (e-CAM) integrates TAM and TPB to better capture consumer behavior in modern digital contexts where social interaction, user experience, and media content are central. Unlike traditional models that focus primarily on technological or cognitive dimensions, e-CAM emphasizes the influence of user-generated and influencer-generated content, especially during livestream shopping, where real-time communication enhances perceived authenticity and emotional engagement.

In parallel, the Stimulus–Organism–Response (SOR) model developed by Mehrabian and Russell (1974) serves as a classical behavioral framework frequently applied in marketing and consumer research. It elucidates how environmental stimuli (e.g., visual design, messaging, influencer attributes) elicit cognitive and emotional responses, ultimately driving behavioral outcomes. A study by Tran and Uehara (2023) confirmed that KOL-related stimuli such as perceived congruence and reputation significantly impact consumer trust and purchase intention. When consumers perceive that a KOL's image aligns with the product or brand, they are more likely to trust the recommendation and act upon it.

Another useful framework is the Elaboration Likelihood Model (ELM), proposed by Petty and Cacioppo (1986), which distinguishes between two routes of persuasion. The central route occurs when consumers are highly motivated and capable of processing information, leading them to evaluate logical arguments and evidence. Conversely, the peripheral route emerges when motivation is low, and consumers are more susceptible to external cues such as the influencer's popularity or social proof. Luo et al. (2024) applied ELM to explain impulse buying behavior in livestream commerce and found that peripheral cues, particularly KOL endorsements, significantly influence spontaneous purchases, especially during time-limited sales events.

Finally, the AISAS model (Attention – Interest – Search – Action – Share), proposed by Dentsu, extends the traditional AIDMA model by incorporating digital-era behaviors such as active information searching and content sharing. This model is especially relevant to e-commerce platforms. Wang et al. (2024) applied AISAS to examine consumer behavior on Xiaohongshu (RED), concluding that influencer reputation, perceived congruence, and inspirational capacity significantly shape the “Search,” “Action,” and particularly the “Share” phases, where consumers amplify product information within their digital networks.

2.2 Related Literature

In the era of rapid digital transformation driven by the Internet and social media, Key Opinion Leaders (KOLs) have emerged as pivotal marketing agents, especially in engaging Generation Z (individuals born between 1995 and 2010). According to He (2024), KOL marketing fosters emotional connections between brands and consumers, enhancing brand awareness and loyalty, which in turn shapes Generation Z's purchase decisions. In the Vietnamese context, Nguyen and Nguyen (2024) analyzed data from Ho Chi Minh City and found that attributes such as expertise, likability, reputation, and interactivity significantly influence the purchase intentions of young consumers. Among these factors, perceived trust plays a mediating role, channeling the influence of KOL attributes toward final purchase decisions.

Key Opinion Consumers (KOCs), unlike traditional celebrities, are everyday consumers with influential voices, particularly through the sharing of personal product experiences and reviews on social platforms. Their perceived authenticity and relatability contribute to building consumer trust and reducing perceived risks, particularly in e-commerce environments where information asymmetry is a common challenge. The informal and unfiltered nature of KOC-generated content often resonates more effectively with young, digitally-native consumers.

In a study conducted by Zhu and Ratasuk (2024) involving 599 users on Xiaohongshu (Little Red Book), a leading Chinese social commerce platform, the authors found that KOCs have a direct positive impact on consumers' purchase intentions. More specifically, trust in KOCs significantly reduces risk perceptions and strengthens intention to purchase. Furthermore, customer trust was shown to mediate the relationship between KOC influence and purchase behavior.

Phan and Nguyen (2024) examined the role of KOCs on TikTok in shaping Generation Z's consumer behavior in Vietnam. Their findings highlight that KOC attributes such as expertise, trustworthiness, and relatability influence the perceived credibility of the message source, which in turn affects purchase intention. Interestingly, likability was found to have no significant effect, indicating that young Vietnamese consumers are more responsive to the content's reliability and relevance rather than the KOC's popularity.

A notable example is Maybelline Vietnam's "Mấy Bé Lì – Chẳng Sợ Gì" campaign on TikTok, which strategically leveraged over 500 KOCs to create makeup tutorial videos promoting the message "Every Flaw is a 10." This campaign effectively encouraged self-expression among youth and resulted in over 5 million user interactions, 2.5 billion video views, a 15% increase in product sales, and substantial improvements in brand recognition among its target demographic.

In addition, Zhou (2023) applied the Stimulus–Organism–Response (SOR) model to analyze how content quality, KOL/KOC influence, and user engagement affect consumer purchase intentions on Xiaohongshu. The study demonstrated that all three components exert significant influence on

consumers' decision-making processes in digital commerce contexts, reinforcing the importance of personalized, engaging, and trustworthy content in influencing behavior.

2.3 Proposed Research Model

Building upon the foundations of several prominent behavioral and marketing models including the Technology Acceptance Model (TAM), the Theory of Planned Behavior (TPB), the Extended Consumer Acceptance Model (e-CAM), the Stimulus-Organism-Response (SOR) framework, the Elaboration Likelihood Model (ELM), and the AISAS decision-making model, this study proposes an integrative model to examine the impact of KOLs (Key Opinion Leaders) and KOCs (Key Opinion Consumers) on university students' purchasing decisions via livestream commerce platforms. The core independent variables include the sales channels used by KOLs/KOCs, the types of products featured, the perceived credibility of the influencers, and the timing of livestream events.

2.3.1. Sales Channels

Hypothesis 1: The livestream sales platforms operated by KOLs/KOCs directly influence students' purchase behavior.

Grounded in the SOR framework (Mehrabian & Russell, 1974), livestream platforms act as environmental stimuli that shape consumers' internal cognitive and emotional states, subsequently affecting their behavioral responses (Zhou, 2023; Tran & Uehara, 2023). University students, as digitally savvy consumers, actively engage with content on platforms such as TikTok Shop, Instagram Reels, and Xiaohongshu. Livestreams, product reviews, and influencer recommendations on these platforms serve as strong stimuli, fostering trust and reducing risk perception, which ultimately stimulate purchasing behavior (Luo et al., 2024).

Zhu and Ratasuk (2024) demonstrated that KOC traits such as credibility and perceived congruence positively impact young consumers' purchase intentions, with trust acting as a crucial mediator. Zhou (2023) further validated that aesthetic appeal, interactivity, and relevance of content significantly shape the organism phase, leading to heightened purchase behaviors.

2.3.2. Product Types

Hypothesis 2: The product categories promoted via KOL/KOC livestreams directly affect students' purchase behavior.

Following the SOR model, featured products represent stimuli that evoke specific emotional and cognitive reactions (organism), which in turn lead to behavioral intentions or actions (Tran & Uehara, 2023). A study by Ngo et al. (2023) involving 344 Gen Z consumers in Vietnam found that entertainment value, information quality, interactivity, and the livestreamer's characteristics significantly influence purchase intention. Tran et al. (2025) further showed that characteristics like popularity, personal appeal, and product-specific expertise of KOLs drive impulse purchases during

livestreams.

He and Jin (2024) applied Dual-Systems Theory to reveal that KOL attributes such as physical attractiveness, credibility, and domain expertise simultaneously activate emotional and rational decision-making systems, thereby strengthening consumers' intention to purchase livestreamed products.

2.3.3. Influencer Credibility

Hypothesis 3: The perceived credibility of KOLs/KOCs has a direct and significant effect on students' purchase behavior.

Zhu and Ratasuk (2024) found that credibility reduces risk perceptions and increases trust, which in turn enhances purchase intention. Hoang et al. (2023) showed that credible KOCs effectively foster customer interaction, enhancing engagement with travel-related content. Gong et al. (2024) extended the SOR model by incorporating persuasion and flow theories, confirming that influencer credibility positively shapes emotional reactions and virtual engagement, ultimately driving purchasing decisions.

2.3.4. Livestream Timing

Hypothesis 4: The timing of livestream events significantly influences students' online purchase behavior.

Bai et al. (2022) and Phan & Nguyen (2024) revealed that livestreams held in the evening, particularly after 7 PM, attract more viewers and yield higher conversion rates, as consumers tend to be more relaxed and available during these hours. Li et al. (2023) confirmed that livestream timing impacts attention, emotional arousal, and readiness to purchase, with evening sessions demonstrating higher effectiveness in stimulating consumer response.

2.3.5. Purchase Decision

Consumer purchase decisions on livestream platforms are influenced by a range of factors, including price, product quality, influencer endorsement, and promotional offers. According to Kotler and Keller (2016), the buying process includes five stages: need recognition, information search, evaluation of alternatives, purchase decision, and post-purchase behavior.

Said et al. (2023) identified that promotions such as free shipping and celebrity endorsements positively influence Gen Z students' purchasing decisions on Shopee Indonesia. Sazimah et al. (2023) noted that perceived convenience enhances, while perceived risk reduces purchase likelihood among Malaysian students. Xia (2022) and Phan & Nguyen (2024) found that credibility, interactivity, and timing during livestreams are key determinants of consumer purchase decisions, reinforcing the vital role of KOL/KOC dynamics and the model in Figure 1.

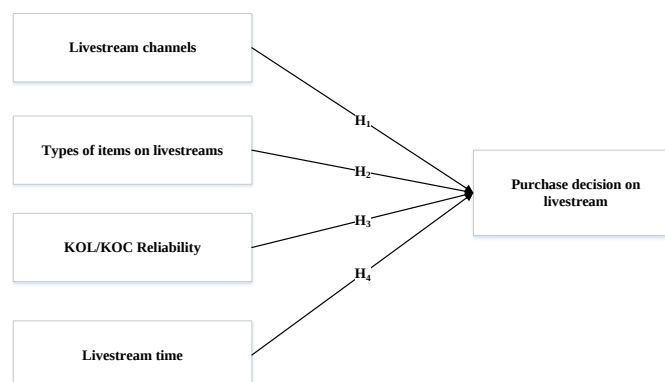


Figure 1: The research proposal

3. RESEARCH METHODOLOGY

3.1 Research procedure

The research followed a systematic procedure consisting of the following stages: identifying research objectives → reviewing relevant theoretical models to develop hypotheses → constructing the proposed research model → developing preliminary measurement scales → refining and finalizing the measurement instruments → conducting a survey and performing preliminary data screening and descriptive statistics → testing internal consistency using Cronbach's Alpha → conducting Exploratory Factor Analysis (EFA) → examining Pearson correlation → building a multiple linear regression model → interpreting the results and deriving managerial implications.

The first step in any empirical investigation is the articulation of clear and focused research objectives. In the context of university students' online purchasing behavior on livestream platforms operated by KOLs and KOCs, the research aims to explore, evaluate, and validate the determinants of consumer decision-making. A clearly defined objective serves as the backbone of a coherent and logically structured research framework (Creswell & Creswell, 2018).

Grounded in these objectives, the next step involves reviewing foundational theories to formulate suitable hypotheses. Commonly applied models in digital consumer behavior include the SOR model (Mehrabian & Russell, 1974), the TAM (Davis, 1989), and the TPB (Ajzen, 1991). These models help elucidate how variables such as credibility, interactivity, media content, and emotional engagement influence consumer actions.

A proposed research model is constructed based on a synthesis of theoretical frameworks and empirical findings. The model typically incorporates independent variables (KOL/KOC credibility, livestream timing, product categories), dependent variables (purchase decision), and possibly mediating or moderating variables (e.g., consumer trust, perceived risk), enabling the formulation of testable hypotheses using quantitative analysis (Hair et al., 2014).

Measurement scales for each construct are then developed, drawing from validated instruments in prior studies. For instance, Ohanian's (1990) scale for source credibility, Sokolova and Perez's (2021) metrics for KOL influence in social media, and Kim and Johnson's (2016) constructs for purchase intention in e-commerce settings are commonly adapted.

Preliminary instruments undergo a pilot test to evaluate clarity, contextual appropriateness, and internal consistency. After refinement, finalized scales are distributed in the main survey, typically employing a 5-point or 7-point Likert scale to capture respondents' levels of agreement.

Collected data are cleaned, coded, and analyzed using descriptive statistics to describe the sample characteristics (e.g., gender, age, shopping frequency, preferred platforms). Cronbach's Alpha is employed to assess the internal consistency of multi-item scales, with a threshold of $\alpha \geq .70$ and item-total correlation $\geq .30$ considered acceptable (Nunnally & Bernstein, 1994).

The EFA is conducted to assess convergent and discriminant validity of the constructs, using Principal Axis Factoring and Varimax rotation. $KMO > .60$ and total variance explained $\geq 50\%$ are established benchmarks for validity.

Pearson's correlation coefficients are examined to evaluate the linear relationship between variables and ensure the absence of multicollinearity before proceeding to regression analysis.

Multiple Linear Regression (MLR) is used to identify the magnitude and statistical significance of each independent variable's impact on the dependent variable. Key statistics including standardized Beta coefficients, R^2 , adjusted R^2 , and the F-test are reported to evaluate model fit and explanatory power.

The results are synthesized to support or reject the hypotheses, and practical implications are offered for marketers and business managers. Recommendations include selecting optimal livestream timings, enhancing the credibility and expertise of KOLs/KOCs, creating interactive and authentic content, and aligning product categories with students' behavioral preferences.

3.1 Measurement scales in the research model

The variables in the proposed model were measured using structured instruments based on a 5-point or 7-point Likert scale, ranging from "strongly disagree" (1) to "strongly agree" (5 or 7), depending on the distributional properties and reliability of each scale. All measurement items were adapted from well-established international studies and refined to fit the context of livestream commerce and university student behavior in Vietnam.

This hypothesis posits that beyond individual platform features, product types, timing, or credibility, the overall presence, delivery style, and real-time interaction of KOLs/KOCs during livestreams function as comprehensive stimuli influencing cognitive-emotional responses and behavioral outcomes. It aligns with the SOR model, emphasizing that the influencers themselves, through their

visibility, presentation, and persuasive ability, serve as central stimuli that can shape viewers' decision-making processes (Zhou, 2023; Tran & Uehara, 2023).

The measurement scales were grouped into the following Table 1 constructs:

Table 1: Measurement Scales Table

<i>Variable Names and Symbols</i>	<i>Brief Description</i>	<i>References</i>
Hypothesis 1: The livestream sales platforms operated by KOLs/KOCs directly influence students' purchase behavior.		
TD1. Platform Convenience	The livestream platform used by the KOL/KOC is easy to access and user-friendly	(Zhou, 2023; Li et al., 2023)
TD2. Platform Interactivity	The platform enables real-time interaction between consumers and the KOL/KOC during livestream sessions	(Luo et al., 2024; Phan & Nguyen, 2024)
TD3. Content Personalization	The livestream content is personalized and matches my individual preferences and interests	(Ngo et al., 2023)
TD4. Platform Popularity	I am more attracted to livestream platforms that are widely used and positively reviewed by other users.	(Zhu & Ratasuk, 2024)
Hypothesis 2: The product categories promoted via KOL/KOC livestreams directly affect students' purchase behavior.		
MH1. Product Familiarity	I am already familiar with the product categories promoted during the livestream	(Ngo et al., 2023; He & Jin, 2024)
MH2. Personal Relevance	The products presented in the livestream are suitable for my current personal needs.	(Kim & Johnson, 2016)
MH3. Product Clarity	Product features and specifications are clearly communicated during the livestream session	(Xia, 2022)
MH4. Product–KOL Congruence	The products promoted during the livestream align well with the KOL's image and style.	(Sokolova & Perez, 2021)
Hypothesis 3: The perceived credibility of KOLs/KOCs has a direct and significant effect on students' purchase behavior.		

KO1. Perceived Expertise	The KOL/KOC demonstrates a deep understanding of the products they promote.	(Ohanian, 1990; Sokolova & Perez, 2021)
KO2. Perceived Honesty	The KOL/KOC provides transparent and non-exaggerated information about the products.	(Zhu & Ratasuk, 2024)
KO3. Value Congruence	I feel that the KOL/KOC shares values and beliefs that are similar to mine	(Lou & Yuan, 2019; Kim & Johnson, 2016)
KO4. Social Reputation	The KOL/KOC is widely trusted and respected by the online community.	(Gong et al., 2024)
Hypothesis 4: The timing of livestream events significantly influences students' online purchase behavior.		
TG1. Schedule Convenience	The livestream sessions usually take place during my free time	(Bai et al., 2022; Phan & Nguyen, 2024)
TG2. Schedule Regularity	The livestreams are organized on a regular and predictable schedule, making it easy to follow	(Li et al., 2023)
TG3. Advance Notification	I receive early notifications about upcoming livestreams, which allows me to plan my time accordingly.	(Gong et al., 2024)
TG4. Psychological Timing Sensitivity	I tend to spend more during specific time periods (e.g., end of the month, holidays, or promotional events)	(Said et al., 2023)
The presence and influence of KOLs/KOCs during livestream sessions have a direct and significant impact on students' online purchase decisions		
QD1. Immediate Purchase Intention	I feel a strong desire to purchase the product immediately after watching a livestream	(Xia, 2022; Kim & Johnson, 2016)
QD2. Information Search Behavior	After the livestream, I actively seek more information before making a purchase decision	(Sazimah et al., 2023)
QD3. Conversion to Purchase	I have completed purchases based on what I saw during a livestream session	(Said et al., 2023)

QD4. Post-Purchase Satisfaction	I feel satisfied with my purchase decision based on the information and experience from the livestream.	(Kotler & Keller, 2016)
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4. FINDINGS

4.1. Descriptive statistics

Out of a total of 486 valid survey responses, 207 participants identified as male (42.7%), 273 as female (56.3%), and 7 did not disclose their gender (1%). The predominance of female respondents reflects broader behavioral trends, wherein women generally exhibit greater engagement with online shopping platforms and are more likely to be influenced by content presented by Key Opinion Leaders (KOLs) or Key Opinion Consumers (KOCs)—a finding consistent with prior literature (Sokolova & Perez, 2021). Although the proportion of non-disclosed or non-binary gender participants was only 1%, this highlights the importance of considering gender diversity in contemporary marketing analytics and segmentation.

The study targeted individuals aged 18 to 30, a demographic often labeled as "digital natives" due to their high exposure to social media and e-commerce platforms (Zhou et al., 2022). Consumers within this age range are particularly receptive to visually dynamic and interactive forms of marketing, such as livestream shopping events led by KOLs/KOCs, which often combine entertainment and persuasive elements (Chen et al., 2023). In contrast, respondents aged 40 or older constituted a negligible portion of the sample, likely due to the university-based sampling frame where most participants were students aged 18 to 25.

University students made up the largest segment of the sample (52%), followed by students concurrently working part-time in private sector companies. This group exhibits high digital literacy and frequent engagement with livestream commerce and influencer-driven content, positioning them as a primary audience for KOL/KOC marketing initiatives (Sokolova & Perez, 2021).

Regarding income distribution, 41.9% of respondents reported a monthly income below VND 5 million (~USD 200), categorizing them within the low to lower-middle income bracket. This indicates a heightened sensitivity to promotional content, price discounts, and impulsive marketing strategies typically employed during livestream sessions. Notably, such price-conscious consumers are ideal targets for promotional campaigns centered on fast-moving consumer goods (FMCGs), trend-driven products, and limited-time offers (Gong et al., 2024).

The majority of respondents reported spending between VND 500,000 and VND 1 million (~USD 20–40) per purchase (39.8%), followed by those spending between VND 1 million and VND 2 million (~USD 40–80) (28.5%). This trend reveals that most young consumers are primarily interested in moderately priced goods, such as cosmetics, fashion, lifestyle accessories, and affordable electronics. As such, KOL/KOC-led promotions should focus on products within this price range and incorporate

urgency-based messaging such as flash deals or limited-time discounts to stimulate action (Kim & Johnson, 2016).

A particularly noteworthy finding is that 81.3% of respondents reported spending between 30 minutes to 2 hours daily watching livestreams. This level of engagement underscores the central role of livestreaming not only as a form of digital entertainment but also as an effective marketing and sales channel. Such intense interaction allows KOLs/KOCs to strengthen emotional connection, build trust, and exert persuasive influence on purchasing decisions (He & Jin, 2024).

These descriptive results provide a foundational understanding of the demographic and behavioral characteristics of the sample, reinforcing the relevance of livestream marketing strategies for young, digitally engaged consumers. The summary in Figure 1 as follow:

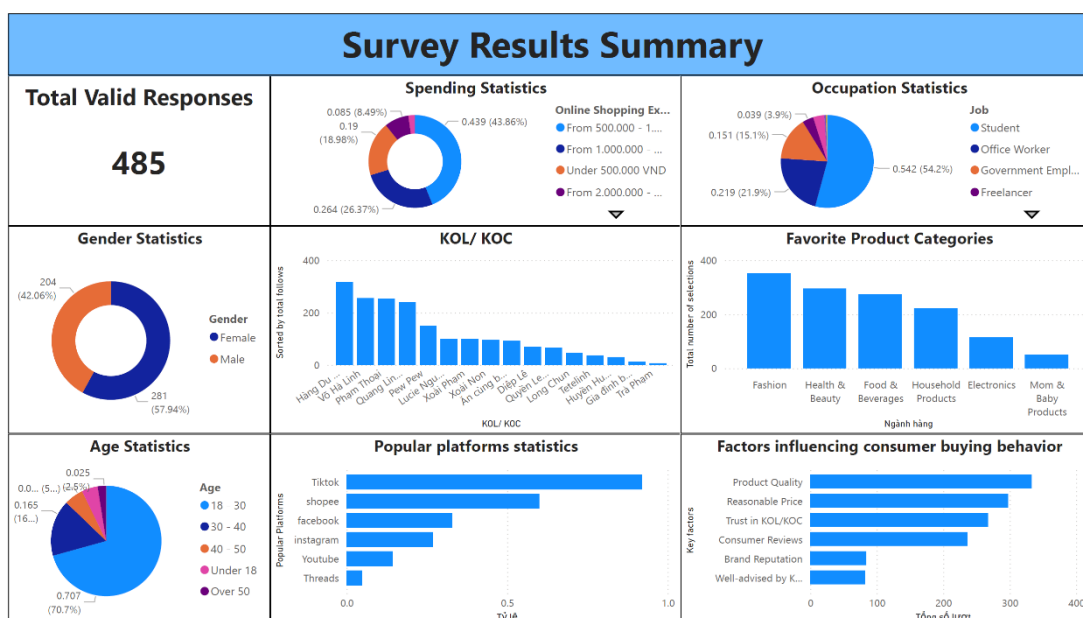


Figure 1: Descriptive Survey Results

4.2. Results test

4.2.1. Cronbach's Alpha reliability test

In quantitative research, assessing the internal consistency reliability of measurement scales is a critical step to ensure that the observed items reliably capture the same underlying theoretical construct. One of the most widely used metrics for this purpose is Cronbach's Alpha, originally developed by Cronbach (1951), which quantifies the degree of correlation among items within a construct.

Scholars have proposed threshold values for interpreting Cronbach's Alpha, which serve as guidelines to evaluate scale quality: An Alpha value between 0.80 and 1.00 indicates excellent internal consistency, suggesting that the scale is highly reliable and appropriate for advanced empirical research (Nunnally & Bernstein, 1994; Tavakol & Dennick, 2011). Alpha values from 0.70 to below

0.80 are considered acceptable, particularly in exploratory or practice-oriented empirical studies (Peterson, 1994; Hair et al., 2014). In some behavioral and social research, where constructs are more abstract or scales are still under development, Alpha values from 0.60 and above may be deemed sufficient (Slater, 1995; George & Mallery, 2020), especially when theoretical justification is provided for scale refinement.

In addition, the Corrected Item–Total Correlation (CITC) is another key indicator. According to Nunnally and Bernstein (1994), a CITC value of ≥ 0.30 is generally acceptable, as it implies that the item correlates positively and meaningfully with the overall construct it is intended to measure.

The Cronbach’s Alpha test results for each construct in the proposed model will be detailed in the following section, providing insight into the reliability of each dimension used to examine livestream-based purchasing behavior.

Table 2: Cronbach’s Alpha test results

<i>Item-Total Statistics</i>				
	<i>Scale Mean if Item Deleted</i>	<i>Scale Variance if Item Deleted</i>	<i>Corrected Item-Total Correlation</i>	<i>Cronbach's Alpha if Item Deleted</i>
TD1	11,69	5,075	0,768	0,864
TD2	11,66	5,242	0,773	0,862
TD3	11,68	5,087	0,770	0,863
TD4	11,71	5,288	0,757	0,868
MH1	11,59	4,957	0,752	0,850
MH2	11,61	4,944	0,761	0,847
MH3	11,60	5,004	0,749	0,852
MH4	11,61	5,056	0,732	0,858
KO1	11,67	5,595	0,779	0,871
KO2	11,61	5,561	0,787	0,868
KO3	11,64	5,615	0,787	0,868

KO4	11,64	5,732	0,756	0,879
TG1	11,76	5,912	0,783	0,875
TG2	11,78	5,871	0,784	0,874
TG3	11,73	5,878	0,780	0,876
TG4	11,75	5,818	0,783	0,875
QD1	11,86	3,279	0,627	0,768
QD2	11,85	3,218	0,619	0,771
QD3	11,88	3,136	0,650	0,756
QD4	11,88	3,188	0,631	0,766

Following the assessment of internal consistency using Cronbach's Alpha, the reliability coefficient for the observed variable group was reported at $\alpha = 0.813$, exceeding the widely accepted threshold of 0.60 as recommended by Nunnally and Bernstein (1994), and meeting the "good" reliability criterion established by George and Mallery (2020). This result indicates a high level of internal consistency among the observed items and affirms that the scale is sufficiently reliable to proceed to subsequent analytical stages.

In addition, the Corrected Item–Total Correlation (CITC) analysis showed that all four observed variables exhibited CITC values greater than 0.30, suggesting strong and statistically meaningful correlations between each item and the total construct score. This condition is essential to confirm that the items measure a coherent and unified latent concept (Hair et al., 2019). The absence of any item with a CITC value below the threshold also indicates that no item needs to be removed at this stage of reliability testing.

Given that all items satisfy the recommended CITC criterion (≥ 0.30), they are deemed appropriate for inclusion in the EFA, which is the next step in validating the scale's factorial structure (DeVellis, 2017). Retaining all items not only strengthens the content validity and conceptual representation of the latent construct, but also enhances the precision and generalizability of findings in subsequent factor-based modeling approaches.

4.2.2. Exploratory Factor Analysis (EFA)

To assess the suitability of the dataset for Exploratory Factor Analysis (EFA), two widely used statistical diagnostics were employed: the Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy and Bartlett's Test of Sphericity. According to Hair et al. (2019), a KMO value of at least 0.50 is required to confirm that the correlations among variables are sufficiently high to justify factor analysis. Values below this threshold indicate that the factor structure may not be appropriate for the dataset (Kaiser, 1974).

In parallel, Bartlett's Test of Sphericity examines the null hypothesis that the correlation matrix is an identity matrix. A statistically significant result (Sig. < 0.05) indicates that observed variables are intercorrelated at a level adequate for factor extraction (Tabachnick & Fidell, 2019; Yong & Pearce, 2013).

In conducting EFA, factors were extracted using the Eigenvalue ≥ 1.0 rule, as recommended by Kaiser (1974). Additionally, a minimum total variance explained of 50% is required to ensure that the extracted factors account for a substantial portion of the original variance (Hair et al., 2019).

The Factor Loading value indicates the strength of the relationship between each observed variable and its latent construct. According to Stevens (2009), for sample sizes of 300 or more, a minimum factor loading of 0.50 is recommended to ensure both statistical significance and construct representation. Given that the current study includes $N = 485$ respondents, the research team adopted 0.50 as the cutoff criterion for retaining items, aligning with best practices in scale validation.

In cases where an item loads strongly on multiple factors, a minimum difference of 0.50 between loadings was used to determine clear factor membership and minimize cross-loading effects, thereby enhancing discriminant validity (Nguyen Dinh Tho, 2011; Costello & Osborne, 2005).

The EFA results revealed a KMO value of 0.903, which exceeds the minimum threshold and is considered "superb" according to Kaiser's classification. Bartlett's Test of Sphericity was statistically significant at Sig. = 0.000, indicating that the data are highly factorable. Based on the Eigenvalue ≥ 1.0 criterion, four factors were successfully extracted, with the lowest eigenvalue at 2.993. The total cumulative variance explained reached 76.316%, well above the recommended 50% threshold. These results provide strong evidence of the model's explanatory power and confirm that the dataset is suitable for exploratory factor analysis.

The KMO and Bartlett's test results are presented in the following Table 3, which affirms the dataset's appropriateness for further construct validation through factor analysis

Table 3: KMO and Bartlett's Test test results

<i>KMO and Bartlett's Test</i>		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		,903
Bartlett's Test of Sphericity	Approx. Chi-Square	4,839,135
	df	120
	Sig.	0

The EFA was conducted to identify the underlying factor structure of the dataset, which comprised 16 observed variables. The results revealed that these items were successfully grouped into four distinct latent factors. The total variance explained reached 76.316%, which exceeds the recommended minimum threshold of 50% commonly accepted in social science research (Hair et al., 2019). This high cumulative variance indicates that the extracted factors account for the majority of variability in the original dataset, suggesting strong explanatory power of the model.

Table 4: Rotated Component Matrixa results

<i>Rotated Component Matrixa</i>					
	<i>Component</i>				
	1	2	3	4	5
TD1	,837				
TD2	,838				
TD3	,829				
TD4	,827				
MH1		,840			
MH2		,839			

MH3		,823			
MH4		,820			
KO1			,844		
KO2			,843		
KO3			,846		
KO4			,822		
TG1				,856	
TG2				,854	
TG3				,837	
TG4				,839	
QD1					,797
QD2					,790
QD3					,814
QD4					,800

The number of retained factors was determined based on the Eigenvalue > 1.0 criterion, following Kaiser's (1974) recommendation. In this analysis, all extracted factors surpassed this threshold, with the lowest Eigenvalue recorded at 1.825, signifying that each factor contributes meaningfully to the explanation of total variance. And the result of rotated component matrix in Table 4.

Furthermore, the factor loading results confirmed that the independent and dependent constructs in the proposed model demonstrated adequate convergent and discriminant validity, as factor loadings were all above the accepted threshold, and cross-loadings were minimal. These findings collectively confirm the appropriateness of EFA for the current dataset and provide robust empirical support for the construct validity of the measurement model.

And the result of rotated component matrix in Table 4.

4.2.3. Pearson Correlation Analysis

A Pearson correlation analysis was conducted to examine the linear relationships between the independent variables and the dependent variable within the proposed research model. The results revealed that all correlation coefficients were statistically significant, with p-values (Sig.) less than 0.05, specifically Sig. = 0.000. This indicates statistical significance at the 95% confidence level, allowing the rejection of the null hypothesis (H_0), which posits no linear association among the variables. Consequently, it can be concluded that the independent variables are significantly correlated with the dependent variable.

The Pearson correlation coefficients (r) between independent variables and the dependent variable ranged from 0.499 to 0.630, reflecting moderate to strong positive linear relationships. Specifically, the variable Product Category yielded a correlation of $r = 0.499$, suggesting a moderate association with the dependent variable, Purchase Decision. In contrast, the variables Livestream Timing ($r = 0.630$), Sales Channel Influence ($r = 0.525$), and Trust in KOL/KOC ($r = 0.565$) demonstrated stronger correlations, indicating that these factors are more influential predictors of students' purchasing decisions. Notably, Livestream Timing exhibited the highest correlation coefficient, emphasizing its critical role in shaping consumer buying behavior.

To assess potential multicollinearity among the independent variables, intercorrelations between the predictor variables were also examined. Several variable pairs exhibited p-values greater than 0.05, suggesting no statistically significant linear relationship, and thus indicating a low risk of multicollinearity based on simple correlation alone. However, to rigorously diagnose multicollinearity, multiple linear regression analysis and the computation of VIF are recommended. According to Hair et al. (2019), VIF values exceeding 5 may indicate problematic levels of multicollinearity, while values above 10 signify severe multicollinearity that may necessitate corrective measures.

Table 5: The Correlations Pearson results

		<i>Correlations</i>				
		<i>QD_TB</i>	<i>TD_TB</i>	<i>MH_TB</i>	<i>KO_TB</i>	<i>TG_TB</i>
QD	Pearson Correlation	1	,630**	,499**	,565**	,525**
	Sig. (2-tailed)		0	0	0	0
	N	485	485	485	485	485

TD	Pearson Correlation	,630**	1	,372**	,401**	,365**
	Sig. (2-tailed)	0		0	0	0
	N	485	485	485	485	485
MH_	Pearson Correlation	,499**	,372**	1	,352**	,330**
	Sig. (2-tailed)	0	0		0	0
	N	485	485	485	485	485
KO_	Pearson Correlation	,565**	,401**	,352**	1	,376**
	Sig. (2-tailed)	0	0	0		0
	N	485	485	485	485	485
TG_	Pearson Correlation	,525**	,365**	,330**	,376**	1
	Sig. (2-tailed)	0	0	0	0	
	N	485	485	485	485	485

4.3. Multiple Linear Regression Analysis

4.3.1. ANOVAa test

To further evaluate the predictive relationships between the independent variables and the dependent variable (purchase decision), a Multiple Linear Regression (MLR) analysis was conducted. This statistical method enables the estimation of the simultaneous influence of multiple predictors on a single outcome, while also controlling for potential interactions and overlapping variance between predictors (Hair et al., 2019).

The regression model included four independent variables: Sales Channel, Product Category, KOL/KOC Credibility, and Livestream Timing, all of which were previously validated through reliability and factor analysis. The dependent variable was Student Purchase Decision.

The results revealed that the regression model accounts for approximately 59.5% of the variance in the

dependent variable, as indicated by the Adjusted R^2 value of 0.595. This suggests a moderately high explanatory power, particularly within the context of consumer behavior research, where a multitude of external factors may influence purchase decisions (Hair et al., 2019).

The Adjusted R^2 is generally preferred over the unadjusted R^2 in multiple regression analysis, as it accounts for the number of predictors in the model. While R^2 may increase with the addition of statistically insignificant variables, Adjusted R^2 penalizes model complexity and will only increase if the new variables improve the model's predictive ability (DataCamp, n.d.). This ensures a more conservative and accurate measure of model fit.

To test the assumption of independence of residuals, the Durbin–Watson statistic was examined. The obtained value of 1.937 falls within the acceptable range of 1.5 to 2.5, indicating no evidence of first-order autocorrelation in the residuals. This validates the model's conformity to the independence assumption, which is essential for the reliability of parameter estimates in linear regression (Tabachnick & Fidell, 2019).

Overall, the regression diagnostics suggest that the model is statistically sound and suitable for predicting student purchase decisions in the context of livestream commerce.

Table 6: ANOVA^a test results

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	97,072	4	24,268	178,702	,000b
	Residual	65,185	480	136		
	Total	162,256	484			

The Analysis of Variance (ANOVA) results from the linear regression model indicate a statistically significant F-statistic of 178.702 with a p-value (Sig.) = 0.000. This demonstrates that the regression model is statistically significant, meaning that at least one independent variable is linearly associated with the dependent variable—in this case, student purchase decision. As emphasized by Hair et al. (2019), an F-test with $p < 0.05$ provides strong evidence that the model, as a whole, fits the empirical data and explains a meaningful proportion of variance in the outcome variable.

To evaluate the assumption of residual independence, the Durbin–Watson test was employed. The resulting Durbin–Watson statistic was 1.937, which falls within the generally accepted range of 1.5 to 2.5. This suggests that there is no evidence of first-order autocorrelation in the residuals, thereby supporting the assumption of residual independence—a crucial condition for ensuring the reliability and validity of regression parameter estimates (Tabachnick & Fidell, 2019).

Together, the significant F-statistic and acceptable Durbin–Watson value confirm that the multiple regression model demonstrates overall goodness-of-fit and adheres to key statistical assumptions required for valid inference in linear modeling

4.3.2. The Coefficients^a results

Regarding the statistical significance of the independent variables, t-tests were employed to determine the extent to which each predictor contributes to explaining the variance in the dependent variable—purchase decision. The results show that all predictors have p-values less than 0.05, with the most significant values being $p = 0.000$ across all variables. This confirms that each independent variable has a statistically significant influence on the dependent variable, consistent with the conventional 0.05 significance level used in social science research (Di Leo & Sardanelli, 2020).

Table 7: The Coefficients^a results

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	,833	,120		6,967	,000
	TD_TB	,287	,026	,370	11,040	,000
	MH_TB	,153	,026	,194	5,946	,000
	KO_TB	,196	,025	,264	7,892	,000
	TG_TB	,166	,024	,227	6,946	,000

Among the independent variables, Sales Channel Influence demonstrated the highest standardized beta

coefficient ($\beta = 0.37$), indicating it is the strongest predictor of consumer purchase decisions in the model. This is followed by KOL/KOC Credibility, which also exhibited a statistically significant, though lower, standardized beta. The remaining variables also showed positive and significant effects, with specific β values reported in the hypothesis testing results Table 7.

The final standardized regression equation can be represented as follows:

$$\text{Purchase Decision} = 0.287 \times H1 + 0.153 \times H2 + 0.196 \times H3 + 0.156 \times H4 + \epsilon_i$$

H1: Influence of Sales Channel

H2: Product Category

H3: Credibility of KOL/KOC

H4: Livestream Timing

ϵ_i : Error term

All standardized beta coefficients (β) are positive, suggesting a direct and favorable relationship between each independent variable and the purchase decision. This finding empirically supports the research hypotheses, indicating that factors such as channel influence, livestream timing, product relevance, and influencer credibility all contribute positively to consumer behavioral intention and decision-making in a livestream commerce context.

Moreover, the use of standardized beta coefficients enables a direct comparison of the relative importance of each predictor, especially when variables are measured on different scales. As noted by Hair et al. (2019), standardized coefficients serve as a valuable tool in identifying the most influential factors within a multiple regression framework, thus offering clearer insights for both theoretical interpretation and managerial application.

4.3.3. The histogram and P-Plot

To verify the normality assumption of residuals in the linear regression model, two commonly used diagnostic methods were applied: the histogram of standardized residuals and the Quantile–Quantile (Q–Q) plot.

The histogram revealed that the residuals were symmetrically distributed around the mean, forming a bell-shaped curve characteristic of a normal distribution. Specifically, the mean of the residuals was approximately zero (Mean = $-1.31E-16$) and the standard deviation was close to one (Std. Dev = 0.996). Most residual values fell within the range of -2 to $+2$ and were concentrated around zero, indicating that the residuals follow an approximately normal distribution.

The Q-Q plot, which compares the quantiles of the residuals with those of a theoretical normal distribution, further supported this conclusion. The plotted data points closely aligned with the 45-degree reference line, suggesting that the residuals are normally distributed. This alignment provides strong visual evidence that the normality assumption is satisfied, which is essential for the validity of inferential statistics and confidence intervals derived from the regression model (DataCamp, n.d.; Tabachnick & Fidell, 2019).

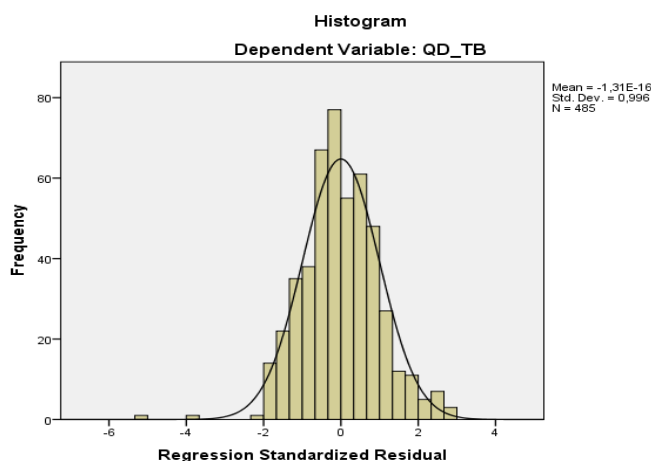


Figure 2: The Histogram results

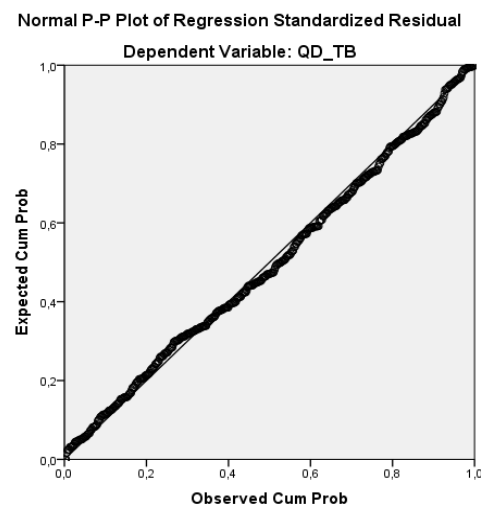


Figure 3: The Normal P-Plot results

In linear regression, validating fundamental assumptions is critical to ensuring the robustness of model estimates. Two core assumptions include: Linearity: The relationship between the independent and dependent variables is linear; Normality of residuals: The residuals of the model are normally distributed.

To assess the linearity assumption, a residuals-versus-predicted values scatter plot was employed. The visual pattern indicated that the data points were randomly dispersed around the horizontal axis (residual = 0) with no discernible pattern or curvature, thereby suggesting a valid linear relationship between the predictors and the outcome variable. As highlighted by Hair et al. (2019), such random dispersion of residuals supports the assumption of linearity.

The Q-Q plot was again used to evaluate the distributional characteristics of the residuals. When the data points closely follow the diagonal reference line, it indicates that the residuals approximate a normal distribution—a condition that strengthens the reliability of statistical inference. As noted by DataCamp (n.d.), the proximity of residuals to the diagonal line in a Q-Q plot is a strong indicator of normal distribution conformity.

Based on these diagnostic tests, the residuals were found to be randomly scattered in the residual plot and closely aligned with the diagonal line in the Q–Q plot. Therefore, both the linearity assumption and the normality of residuals assumption were satisfactorily met. This validation supports the overall reliability and validity of the regression model's estimates and inferential outcomes.

5. Discussion and Implications

In the context of Vietnam's rapidly expanding e-commerce landscape, this study involving nearly 500 digital consumers underscores the significant role of Key Opinion Leaders (KOLs) and Key Opinion Consumers (KOCs) in shaping online purchase behavior. Specifically, the influence of KOLs/KOCs is evident through their ability to foster consumer trust, offer authentic product evaluations, and promote exclusive promotional offers in collaboration with brands.

Livestream shopping sessions hosted by KOLs/KOCs often attract hundreds of thousands of views, with high product turnover facilitated by time-limited incentives. This affirms that influencers not only serve as product ambassadors but also stimulate consumer action in a highly effective manner. As confirmed by Phan et al. (2025), direct interaction and authentic content delivered by KOLs/KOCs enhance trust and significantly drive purchase decisions.

However, the degree of influence exerted by KOLs/KOCs varies depending on their credibility, domain expertise, and alignment with consumer preferences. Influencers whose lifestyle and interests resonate with their audience tend to exert stronger persuasive effects. This aligns with the Two-Step Flow of Communication model, where influencers serve as intermediaries who more effectively transmit brand messages to consumers than traditional mass media (Katz, 1957).

Research by Nguyen et al. (2024) emphasizes that the effectiveness of KOL/KOC marketing is contingent upon congruence between influencer identity and target audience values. Businesses should partner with influencers whose personal brand, values, and domain expertise reflect those of their consumers to optimize engagement and message receptivity.

According to Phan et al. (2025), consumers increasingly value genuine product experiences over scripted endorsements. Firms should therefore encourage KOLs/KOCs to share personal, transparent narratives, rather than relying solely on promotional content, to build trust and perceived credibility. Combining the broad reach of KOLs with the relatability of KOCs can yield a synergistic effect, offering both wide exposure and grassroots authenticity. This is particularly effective on platforms like TikTok, where short-form, real-life content is highly favored (Nguyen et al., 2024).

The rapid growth of KOL/KOC-based marketing necessitates a clear regulatory framework to

safeguard consumer rights and promote advertising transparency. Regulatory bodies should consider issuing guidelines for mandatory disclosure of commercial affiliations and clarify the legal accountability of influencers in cases of misleading claims.

To enhance content quality and ethical standards, structured programs should be developed to train KOLs/KOCs in communication ethics, product literacy, and media professionalism. These initiatives not only improve influencer competence but also contribute to building long-term consumer trust.

Investments in quantitative and qualitative research examining the impact of KOL/KOC marketing on consumer behavior are essential. Such studies provide actionable insights for businesses and policymakers alike by identifying trends, evaluating strategy effectiveness, and isolating key success factors in influencer-driven campaigns.

6. CONCLUSION

This study has elucidated the critical role of Key Opinion Leaders (KOLs) and Key Opinion Consumers (KOCs) in shaping online purchasing behavior among Vietnamese consumers. Drawing on data from nearly 500 respondents, the findings highlight that authentic content and direct engagement from KOLs/KOCs significantly enhance consumer trust and serve as key drivers of purchase decision-making in the context of livestream e-commerce.

While the study contributes valuable insights to the emerging literature on influencer-based digital marketing, several limitations should be acknowledged. First, the sample primarily consists of young consumers, potentially limiting the generalizability of the results to older age cohorts. Second, the research design reflects a cross-sectional snapshot, and thus cannot capture dynamic shifts in consumer behavior over time. Third, the focus on Vietnam's e-commerce market may restrict the applicability of the findings to other cultural or market contexts with differing digital consumption patterns.

To address these limitations and advance understanding of KOL/KOC influence, future research should consider the following directions: Expanding sample demographics across age groups and regions to provide a more comprehensive understanding of influencer impact across diverse consumer segments. Conducting longitudinal studies to capture evolving patterns in consumer responses to KOL/KOC engagement over time. Comparative cross-cultural investigations to explore how KOL/KOC influence varies across national markets and sociocultural contexts. In-depth exploration of moderating variables, such as influencer credibility, domain relevance, and value congruence, to better explain the mechanisms through which KOLs/KOCs affect consumer decision-making.

In conclusion, this study offers empirical evidence of the growing influence of KOLs and KOCs in

digital commerce and provides strategic implications for both marketers and policymakers. However, to fully grasp the complexity and dynamism of influencer-driven purchasing behavior, broader and more nuanced research efforts are required in future investigations.

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